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NOVEMBER 2004 DRAFT CENTRAL VALLEY PROJECT, WEST SAN JOAQUIN DIVISION, SAN LUIS UNIT (SLU) LONG-TERM WATER SERVICE CONTRACT RENEWAL ENVIRONMENTAL IMPACT STATEMENT (EIS)

Thank you for the opportunity to review the subject report. Our review of the proposed project indicates that it has significant potential for adversely impacting both surface and ground water quality in the San Joaquin River Basin and we recommend that the Bureau incorporate additional measures to offset these impacts.

The proposed project will result in delivery of water from the Delta to lands within the San Joaquin River Basin. The Lower San Joaquin River (LSJR) is listed on the Federal Clean Water Act's 303 (d) list as an impaired water body for salt and boron. The impairment extends from downstream of Mendota Pool to the Airport Way Bridge near Vernalis. In response to this impairment the Regional Board has adopted a Total Maximum Daily Load (TMDL) for salinity and boron. This TMDL: 1) identifies the major sources of salt and boron loading to the LSJR; 2) determines the load reductions of salt and boron necessary to achieve attainment of applicable water quality objectives in order to protect the beneficial uses of the water; and 3) allocates the available assimilative capacity among the identified sources. The U.S. Bureau of Reclamation was assigned responsibility for reducing the salt and boron loading in the river. The contracts that are being proposed for the Long-Term Water Service Contract Renewal covered by this draft EIS, in addition to contracts in units with a hydrological connection to the basin, such as the Delta Mendota Canal Unit, must be reviewed with this responsibility in mind. As the Bureau evaluates operations within the San Joaquin Basin, it should also be aware that the Central Valley Regional Water Quality Control Board was directed in the State Water Resources Control Board's Water Rights Decision 1641 to establish water quality objectives for salinity upstream of Vernalis. It is anticipated that this project will result in additional restrictions (over and above the existing TMDL) being placed on discharges to the river from irrigated lands.

The State Water Resources Control Board issued Revised Water Right Decision 1641 on March 15, 2000. With respect to the Bureau's proposed project, major relevant portions of the decision follow:

- *From the 1960s onward there has been an increase in salt load concentrations.*

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- *High salinity at Vernalis is caused by surface and subsurface discharges to the river of highly saline water. The sources of the discharges are agricultural lands and wetlands... These areas receive approximately 70 percent of their water supply from the CVP, 20 percent from precipitation and 10 percent from groundwater.*
- *The TDS concentration of agricultural drainage water from the Grasslands area that discharges to the river through Mud Slough is approximately 4,000 mg/l. (The Grasslands area includes lands in the northern portion of the SLU)*
- *In some cases, drainage water is more than ten times the concentration of the Vernalis salinity standard.*
- *The subsurface drainage problem is region-wide.*
- *In the western San Joaquin Valley, the salts originate from the application of irrigation water and from soil minerals, which dissolve as water flows through the soil. The salts are stored in groundwater. As more water is applied, hydraulic pressures increase, water moves downgradient, and salt-laden waters are discharged through existing drainage systems and directly to the river as groundwater accretion.*
- *Based on the above discussion, the SWRCB finds that the actions of the CVP are the principal cause of the salinity concentrations exceeding the objectives at Vernalis. The salinity problem at Vernalis is the result of saline discharges to the river, principally from irrigated agriculture, combined with low flows in the river due to upstream development. The source of much of the saline discharge to the San Joaquin River is from lands on the west side of the San Joaquin Valley which are irrigated with water provided from the Delta by the CVP, primarily through the Delta-Mendota Canal and the San Luis Unit. The capacity of the lower San Joaquin River to assimilate the agricultural drainage has been significantly reduced through the diversion of high quality flows from the upper San Joaquin River by the CVP at Friant. The USBR, through its activities associated with operating the CVP in the San Joaquin River basin, is responsible for significant deterioration of water quality in the southern Delta. (Emphasis added)*

Staff has reviewed the *Draft Central Valley Project, West San Joaquin Division, San Luis Unit Long-Term Water Service Contract Renewal Environmental Impact Statement*. The following comments apply to the San Luis Unit EIS:

General Comments

The EIS does not adequately address the total geographic and temporal extent of the cumulative impacts due to the delivery and recirculation of Delta water that contains significant levels of salts and boron. Starting at the bottom of page 1-1 the Environmental Impact Statement (EIS) mentions, "Reclamation proposes to renew 114 CVP water service contracts throughout the Central Valley. These contracts include an annual maximum quantity of approximately 5.6 million acre-feet of CVP water and provide water service to approximately 3.2 million irrigable acres of land and an urban population in excess of 4.3 million." However, the EIS for renewal of the SLU contracts does not indicate that the total

geographic and temporal extent of the direct and cumulative impacts due to the delivery and recirculation of Delta water to 114 CVP water service contractors has been adequately evaluated.

Please note that EPA document 315-R-99-002/May 1999 *Consideration of Cumulative Impacts in EPA Review of NEPA Documents* provides the following guidance:

The combined, incremental effects of human activity, referred to as cumulative impacts, pose a serious threat to the environment. While they may be insignificant by themselves, cumulative impacts accumulate over time, from one or more sources, and can result in the degradation of important resources. Because federal projects cause or are affected by cumulative impacts, this type of impact must be assessed in documents prepared under the National Environmental Policy Act (NEPA).

Also:

...reviewers should determine whether the NEPA analysis has used geographic and time boundaries large enough to include all potentially significant effects on the resources of concern. (emphasis added)

Specific comments:

- 1) Table 2-2 on page 2-9 lists eight contractors totaling a contract amount of 1,395,670 acre-feet of water per year. The Contract terms proposed are 25 years for agriculture and agriculture/M&I (Municipal and Industrial) and 40 years for M&I contracts. The proposed contracts (even at a 60% delivery rate of contract amounts) over 25 years exceed **20 million acre-feet of water**. With an average EC of 500 $\mu\text{S}/\text{cm}$ over **14 million tons of salts and trace minerals** would be delivered to the proposed contractors. Staff asserts that such deliveries would have a negative cumulative impact on land use, agriculture, surface waters (including the San Joaquin River) and groundwater.

The following statement appears on page 3.2-10: *The contracts state that the districts are responsible for compliance with all state and federal water quality standards applicable to surface and subsurface agricultural drainage discharges generated through the use of federal or district facilities or of CVP water within the districts.* Table 2.1, page 2-6; where project alternatives are reviewed states an assumption “*that CVP will operate in accordance with existing rules **without obligation to operate toward water quality goals***” (emphasis added). While it is true that the districts are responsible for compliance with all applicable regulations related to their operations, the Bureau must also bear responsibility for its own actions. Delivery of contract water to the SLU is also delivery of every constituent carried in that water, including salt and other contaminants characterizing Delta water. The Bureau must develop a program to verify that the districts meet all applicable water quality standards/objectives and take action, such as curtailing contract deliveries, when deliveries continue to directly lead to water quality violations.

- 2) The Cumulative Impacts for Drainage analysis (page 3.2-13) fails to discuss any cumulative water quality impacts of drainage on soils, groundwater and surface water due to the delivery of Delta water for 25 to 40 years.
- 3) The Environmental Consequences for Agricultural analysis (page 3.3-2) does not discuss any impacts for the application of water for the term of the contract from the Delta for irrigation, the

leaching of west side soils and the application of saline drainage on soils, groundwater and surface water.

- 4) The Cumulative Impacts for Agriculture analysis pages 3.3-11-12 fails to discuss the long-term, additive impacts of the application of water from the Delta for irrigation, the leaching of west side soils and the application of saline drainage on soils, groundwater and surface water.
- 5) The Cumulative Impacts for Land Use analysis (page 3.5-15) does not discuss the long-term, additive impacts of the application of water from the Delta for irrigation, the leaching of west side soils and the application of saline drainage on soils, groundwater and surface water.
- 6) The third paragraph states, under Soils and Geology page 3.7-2 "*Poor drainage, low permeability, and high sodium content complicate leaching. Leaching increases salinity in the groundwater aquifers, which further exacerbates the salinity problem as the more saline groundwater is used for irrigation. Because of the increase in groundwater salinity, the areas with soil salinity problems have increased. Increased leaching also increases the salinity in flows from subsurface drains, which affects the quality of surface waters that receive the return flows or the water and sediments in evaporation ponds.*" These problems should be fully evaluated and developed under cumulative impacts on page 3.7-8.
- 7) The second paragraph on page 3.8-2 states: "*As agricultural practices have expanded in the region, recharge has been augmented with deep percolation of applied agricultural water and seepage from the distribution systems used to convey this water.*" The cumulative impacts of such actions must be fully developed and discussed for the total project duration (25-40 years), especially in relationship to increased salinity levels in ground and surface waters.
- 8) The cumulative impacts analysis (Pages 3.8-9-10) ignores the groundwater quality degradation criteria mentioned on the bottom of page 3.8-7 from deep percolation of salt laden agriculturally applied water.
- 9) The EIS states: "*Surface water quality in the San Joaquin River Basin is affected by many factors, most notably, the upstream development of Friant Dam, which has withheld most of the natural flow of the river, except during flood conditions*". However, the statement on page 3.9-15: *The No-Action Alternative would not result in any alteration to surface water quality is unsupported.* The continuing diversion of upstream SJR flow and the importation of Delta water will continue to cumulatively degrade surface and groundwater quality in the SJR basin. Nor does the EIS provide any evidence to support the statement on page 3.9-17 under Cumulative Impacts that "*Long-term contract renewals, when added to other past, present and reasonably foreseeable future actions, will not create any additional cumulative impacts on surface water resources quality.*" These statements are clearly in conflict with the statements in the State Water Resources Control Board Decision 1641 as discussed above.
- 10) The conclusion on page 3.14-4 under Selenium that "*The implementation of the No-Action Alternative will not impact selenium concentrations in the groundwater of the San Joaquin Valley*" is not supported. Selenium in the soil is being leached by irrigation water applied to Westside

soils, "augmented with deep percolation of applied agricultural water..." and waters are discharged through existing drainage systems and directly to the river as groundwater accretion to the San Joaquin River and then re-circulated when pumped from the Tracy Pumping Plant.

- 11) The bottom of second paragraph on page 3.9-4 of the Surface Water Resources chapter states: *"From Salt Slough to Fremont Ford, most of the flow in the river is derived from irrigation returns carried by Salt and Mud Sloughs. This reach typically has the poorest water quality of any reach of the river."* *"The surface water quality analysis of the EIS alternatives as compared to the act's requirements indicated that there would be no impacts to water quality from the renewal of the long-term water service contracts, and therefore, there would be no changes in compliance as compared to the No-Action Alternative."* The EIS fails to adequately address the total geographic and temporal extent of the cumulative impacts due to the delivery and recirculation of Delta water and its characteristic load of salts and boron for the next 25-40 years. Without the delivery of water as proposed under the contracts, the volume of agricultural drainage reaching the San Joaquin River would be dramatically reduced and this would influence water quality throughout the lower portion of the river and into the Delta. The reduced pollutant loading would generally result in improvements in the quality of the LSJR.

If you have any questions regarding these comments, please contact Wayne Cooley at (916) 464-4632.



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